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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,400	11/14/2003	Oscar E. Agazzi	13449US03	9900
23446	7590	05/24/2005	EXAMINER	
MCANDREWS HELD & MALLOY, LTD			GHEBRETINSAE, TEMESGHEN	
500 WEST MADISON STREET			ART UNIT	PAPER NUMBER
SUITE 3400				2637
CHICAGO, IL 60661				

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/713,400	AGAZZI, OSCAR E. U
	Examiner Temesghen Ghebretinsae	Art Unit 2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 10-15, 23 and 26-32 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 10-15 and 26-31 is/are rejected.
 7) Claim(s) 23 and 32 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

Claim Objections

2. Claims 14 and 30 are objected to because of the following informalities: "the type of modulation" should be ---type of demodulation--- see claim 13 and 29.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 10-15 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. Claim 10 cites "a plurality of programmable demodulators each accepting the output of one of the mixers and demodulating the mixers output....". However such

particular limitation has no support in the specification. The specification discloses ---a plurality of programmable demodulators each accepting **the output of one of the low-pass filters and demodulating the filtered output**....see specification page 16, line 16- page 17, line 16.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-12,26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (5,896,211) in view of Narahara et al (5,128,919).

Consider claim 10,12 and 26,28. Watanabe discloses an apparatus for receiving data comprising: an input that receives a data signal (121); a plurality of mixers that accept the data signal and mix it with a mixer frequency (122-1-122-k); a plurality of filters that filter the outputs of the mixers (36-1-36-k); a plurality of programmable demodulators each accepting the output of one of the filters and demodulating the filtered output (37-1-37-k); and a combiner circuit for combining the demodulated data outputs from the plurality of demodulators (111).

Watanabe differs from the claimed invention in that the filter is not low-pass filter. However, Narahara et al discloses an apparatus for receiving data comprising: an input that receives a data signal (21,22,34); a plurality of low-pass filters having programmable bandwidth (35A—35D); a plurality of programmable

demodulators each accepting the output of one of the low-pass filter and demodulating the output (36A-36D). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the band pass filter of Watanabe with the low-pass filter of Narahara so that to transmit an alternating current below a given cutoff frequency.

Regarding claims 11 and 27. The mixer frequency of Watanabe is programmable frequency (Lo-LD1-Lo-LDn).

8. Claims 13-14 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Nagai et al (6,393,064).

Watanabe disclose the claimed subject matter substantially as claimed. See above paragraph 7. Watanabe differs from the claimed invention in that the programmable demodulator does not include a control input that controls the type of demodulation applied to the signal accepted from the low pass filter as claimed in claims 13-14 and 29-30. However, Nagai et al discloses an apparatus comprising programmable demodulators comprising a control input that controls the type of demodulation applied to the signals accepted (QAM or QPSK) see fig.9. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the demodulators of Watanabe with the demodulators of Nagai et al so that the system can be more efficient in demodulating different type of signals.

9. Claims 15 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Kimmitt (6,738,935).

As discussed above on paragraph 7, Watanabe discloses the subject matter of the invention substantially as claimed. Watanabe differs from the claimed invention in that the combiner circuit is not a XGMII interface as claimed in claims 15 and 31. However, Kimmitt discloses a combiner circuit comprising well known XGMII interface. Thus, it would have been obvious to replace the combiner of Watanabe with the combiner of Kimmitt since both function the same. That is both combine the output from the demodulators into at least one data stream.

Allowable Subject Matter

10. Claims 23 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to anticipate or render obvious an apparatus comprising the particular claimed limitations of claim 1 in combination with at least one demodulator providing soft decisions and at least one trellis decoder that accepts soft decisions from the at least one demodulators and provides a trellis decoding of the soft outputs and provides a hard decision to the combiner input as claimed in claim 23 and 32.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temesghen Ghebretinsae whose telephone number is 571-272-3017. The examiner can normally be reached on Monday-Friday from 8 to 6. The examiner can also be reached on alternate .

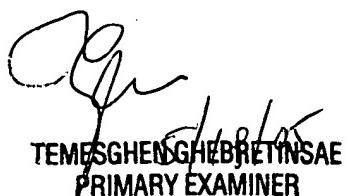
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on 571-272-2899. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Temesghen Ghebretinsae
Primary Examiner
Art Unit 2637

T.G.

5/19/05.



TEMESGHEN GHEBRETTINSAE
PRIMARY EXAMINER